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=> d que l24
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L2             5 SEA FILE=REGISTRY ABB=ON  PLU=ON  F2O2S/MF
L3            52 SEA FILE=REGISTRY ABB=ON  PLU=ON  CO2/MF
L4            17 SEA FILE=REGISTRY ABB=ON  PLU=ON  (12769-73-2/CRN OR 2699-79-8/
                 CRN OR 640723-20-2/CRN OR 855587-99-4/CRN OR 855588-00-0/CRN)
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                 12181-61-2/CRN OR 12351-94-9/CRN OR 124-38-9/CRN OR 12709-62-5/
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L7            85 SEA FILE=CAPLUS ABB=ON  PLU=ON  L5 AND L6
L8             4 SEA FILE=CAPLUS ABB=ON  PLU=ON  L7 AND REM+NT/RL
L9            82 SEA FILE=CAPLUS ABB=ON  PLU=ON  L1 AND L2
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                 REMOV? OR REM/RL)
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                CHRISTOPH"/AU OR "SOMMER CHRISTOPHER"/AU OR "SOMMER CHRISTOPHER
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=> d l24 ibib abs hitind hitstr tot

L24  ANSWER 1 OF 18  CAPLUS  COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER:         2007:1061068  CAPLUS  Full-text
DOCUMENT NUMBER:          147:396347
TITLE:                    Apparatus and process for surface treatment of a
                          substrate using an activated reactive gas
INVENTOR(S):              Garg, Diwakar; Krouse, Steven Arnold; Robertson, Eric
                          Anthony, III; Ma, Pingping
PATENT ASSIGNEE(S):       USA
SOURCE:                   U.S. Pat. Appl. Publ., 33pp., Cont.-in-part of U.S.
                          Ser. No. 80,330.
                          CODEN: USXXCO
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   2
PATENT INFORMATION:

     PATENT NO.            KIND   DATE        APPLICATION NO.         DATE
     ---------------       ----   --------    --------------------    --------
     US 2007218204          A1    20070920    US 2007-689074          20070321
     US 2006062914          A1    20060323    US 2005-80330           20050315
     WO 2006034130          A2    20060330    WO 2005-US33370         20050920
     WO 2006034130          A3    20060803
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ,
             LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ,
             NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG,
             SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN,
             YU, ZA, ZM, ZW
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
             IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
             CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
             GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM
     WO 2007035460          A1    20070329    WO 2006-US35962         20060913
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP,
             KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN,
             MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS,
             RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ,
             UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
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IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRIORITY APPLN. INFO.:

US 2004-612060P	P	20040921
US 2005-80330	A2	20050315
WO 2005-US33370	A	20050920
WO 2006-US35962	A	20060913

AB An apparatus for treatment of a substrate with an activated reactive gas includes a processing chamber, an exhaust manifold, a conveyor adapted to sequentially introduce into the processing chamber untreated portions of the substrate for said treatment and to sequentially remove from the processing chamber treated portions of the substrate, wherein the length of the substrate exceeds a dimension of the inner volume of the processing chamber, and a distribution conduit disposed in the processing chamber. The length of the distribution conduit is approx. equal to the width of the substrate, and the distribution conduit has a number (N) of openings, each opening has a cross sectional area (Ao), a cross sectional area of the distribution conduit (Ac), and a maximum cross-sectional area (N*Ao) of the openings can be determined by the following expression: 1.0*Ac>N*Ao≥0.1*Ac.

INCL 427255110; 118723000R; 118729000; 427248100

CC 76-3 (Electric Phenomena)

IT 75-44-5, Carbonyl chloride 75-46-7, Trifluoromethane 75-73-0, Carbon fluoride (CF4) 76-16-4 76-19-7 115-25-3, Carbon fluoride (C4F8) 124-38-9, Carbon dioxide, processes 334-99-6 335-01-3 335-42-2 353-50-4, Carbonic difluoride 353-85-5 359-40-0, Ethanedioyl difluoride 373-91-1 421-14-7 630-08-0, Carbon monoxide, processes 927-84-4 1495-50-7, Cyanogen fluoride ((CN)F) 1718-18-9 2551-62-4, Sulfur fluoride (SF6) 2699-79-8, Sulfur fluoride oxide (SF2O2) 7647-01-0, Hydrogen chloride, processes 7664-39-3, Hydrofluoric acid, processes 7732-18-5, Water, processes 7782-41-4, Fluorine, processes 7782-44-7, Oxygen, processes 7782-50-5, Chlorine, processes 7783-42-8, Sulfur fluoride oxide (SF2O) 7783-44-0, Dioxygen difluoride 7783-54-2, Nitrogen fluoride (NF3) 7783-60-0, Sulfur fluoride (SF4) 7787-71-5, Bromine fluoride (BrF3) 7790-91-2, Chlorine fluoride (ClF3) 10024-97-2, Nitrous oxide, processes 10025-85-1, Nitrogen chloride (NCl3) 10028-15-6, Ozone, processes 10102-43-9, Nitric oxide, processes 10102-44-0, Nitrogen dioxide, processes 10294-34-5, Boron chloride (BCl3) 11094-71-6, Nitrogen fluoride oxide (NFO) 12763-66-5, Hypofluorite 13637-87-1, Nitrogen chloride fluoride (NClF2) 13709-36-9, Xenon fluoride (XeF2) 15861-05-9, Fluoroamine 16282-67-0 16829-28-0, Oxygen fluoride ((O3)F2) 16984-48-8, Fluoride, processes 17417-38-8, Nitrogen chloride fluoride (NCl2F) 33660-75-2 53912-00-8

RL: PEP (Physical, engineering or chemical process); PROC (Process) (reactive gas; apparatus and process for surface treatment of substrate using activated reactive gas)

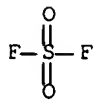
IT 124-38-9, Carbon dioxide, processes 2699-79-8, Sulfur fluoride oxide (SF2O2)

RL: PEP (Physical, engineering or chemical process); PROC (Process) (reactive gas; apparatus and process for surface treatment of substrate using activated reactive gas)

RN 124-38-9 CAPLUS

CN Carbon dioxide (CA INDEX NAME)

RN 2699-79-8 CAPLUS
CN Sulfuryl fluoride (CA INDEX NAME)

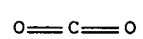


L24 ANSWER 2 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:1175017 CAPLUS Full-text
DOCUMENT NUMBER: 147:179967
TITLE: Analytical method of oxygen isotope compositions in sulfates
AUTHOR(S): Wan, De-fang; Li, Yan-he
CORPORATE SOURCE: Key Laboratory of Metallogeny and Mineral Resources Assessment, Institute of Mineral Resources, CAGS, Beijing, 100037, Peop. Rep. China
SOURCE: Gaoxiao Dizhi Xuebao (2006), 12(3), 378-383
CODEN: GDXUFV; ISSN: 1006-7493
PUBLISHER: Gaoxiao Dizhi Xuebao Bianjibu
DOCUMENT TYPE: Journal
LANGUAGE: Chinese

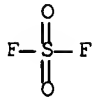
AB Sulfates were a sort of ordinary minerals in the supergene and endo-genetic geol. environment. They were among the few minerals that showed mass independent fractionation of O isotopes. The O isotopic compns. and mass independent fractionation of sulfates could provide useful information for their formation conditions, and reveal special processes that could not be acquired by element concentration or single isotope ratio measurements. This was a frontier and hot topic for isotope geochem. study in the world. Because anal. techniques of O isotopes in sulfates were very complicated, this method was not established until now in China. A traditional BrF5 fluorination method for O isotope measurement of BaSO4 was established recently in the laboratory The separation and purification processes for BaSO4 from sulfate-bearing samples were described. The BrF5 exptl. equipment, purification technique of reagent BrF5, O2 extraction preparation from sulfates and O isotope measurement were introduced. The O isotope compns. of an international standard of BaSO4 NBS-127, and a chemical reagent of BaSO4 were repeatedly measured. The δ18OV-SMOW values of NBS-127 were 0.920 ± 0.011‰, which was the same as the published standard values. The δ18OV-SMOW values of the chemical reagent BaSO4 were 1.464 ± 0.013‰. The anal. precision of O isotope ratios of BaSO4 was up to 0.013‰ (1σ), and better than 0.015-0.029‰ (1σ) reported by Wasserman (1992).

CC 79-1 (Inorganic Analytical Chemistry)
IT 124-38-9P, Carbon dioxide, analysis
RL: ANT (Analyte); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation)
(anal. method of oxygen isotope compns. in sulfates)
IT 2699-79-8, Sulfuryl fluoride 7787-32-8, Barium fluoride
7787-71-5, Bromine trifluoride
RL: FMU (Formation, unclassified); FORM (Formation, nonpreparative)
(anal. method of oxygen isotope compns. in sulfates)
IT 124-38-9P, Carbon dioxide, analysis
RL: ANT (Analyte); SPN (Synthetic preparation); ANST (Analytical study);

PREP (Preparation)
(anal. method of oxygen isotope compns. in sulfates)
RN 124-38-9 CAPLUS
CN Carbon dioxide (CA INDEX NAME)



IT 2699-79-8, Sulfuryl fluoride
RL: FMU (Formation, unclassified); FORM (Formation, nonpreparative)
(anal. method of oxygen isotope compns. in sulfates)
RN 2699-79-8 CAPLUS
CN Sulfuryl fluoride (CA INDEX NAME)



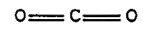
L24 ANSWER 3 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:677935 CAPLUS Full-text
DOCUMENT NUMBER: 145:106172
TITLE: Preparation of nitrogen trifluoride gas of high purity
INVENTOR(S): Chun, Gyeong U.
PATENT ASSIGNEE(S): Dai Beck Co., Ltd., S. Korea
SOURCE: Repub. Korean Kongkae Taeho Kongbo, No pp. given
CODEN: KRXXA7
DOCUMENT TYPE: Patent
LANGUAGE: Korean
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
KR 2004011884	A	20040211	KR 2002-45173	20020731
PRIORITY APPLN. INFO.:			KR 2002-45173	20020731

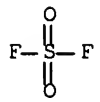
AB Nitrogen trifluoride (NF3) gas of high purity is prepared by removing impurities, such as HF, N2F2, OF2, N2O, CO2 and SO2F2, and moisture from NF2 synthetic gas by (a) treating NF3 with an aqueous KOH solution, thereby converting HF into KF salt which is removed; (b) pyrolyzing N2F2 into nitrogen and fluorine gases at 240-300°; (c) of reducing and removing OF2 and F2 by adding a reducing agent, especially K2S2O3; (d) primarily removing moisture by condensing NF3 at the f.p. using an ethylene glycol based refrigerant; (e) secondarily removing moisture in the NF3 synthetic gas at ≤ -80° using a moisture adsorbent made of zeolite; (f) removing traces of N2O, CO2 and SO2F2 at ambient temperature using a mol. sieve as an adsorbent; and (g) obtaining NF3 of high purity by exhausting N2 and O2 gases generated by the previous steps and condensing NF3 gas.

IC ICM C01B021-083
CC 49-8 (Industrial Inorganic Chemicals)
ST nitrogen trifluoride purifn adsorption redn pyrolysis

condensation
IT 7782-41-4, Fluorine, processes
RL: CPS (Chemical process); FMU (Formation, unclassified); PEP (Physical, engineering or chemical process); REM (Removal or disposal); FORM (Formation, nonpreparative); PROC (Process)
(preparing nitrogen trifluoride gas of high purity)
IT 7664-39-3, Hydrofluoric acid, processes 7783-41-7, Oxygen difluoride
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); REM (Removal or disposal); PROC (Process)
(preparing nitrogen trifluoride gas of high purity)
IT 124-38-9, Carbon dioxide, processes 2699-79-8, Sulfur fluoride oxide (SF2O2) 10024-97-2, Nitrogen oxide (N2O), processes
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); REM (Removal or disposal); PROC (Process)
(preparing nitrogen trifluoride gas of high purity)
IT 10578-16-2, Nitrogen fluoride (N2F2)
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); REM (Removal or disposal); PROC (Process)
(thermal decomposition; preparing nitrogen trifluoride gas of high purity)
IT 124-38-9, Carbon dioxide, processes 2699-79-8, Sulfur fluoride oxide (SF2O2)
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); REM (Removal or disposal); PROC (Process)
(preparing nitrogen trifluoride gas of high purity)
RN 124-38-9 CAPLUS
CN Carbon dioxide (CA INDEX NAME)



RN 2699-79-8 CAPLUS
CN Sulfuryl fluoride (CA INDEX NAME)



L24 ANSWER 4 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:975624 CAPLUS Full-text
DOCUMENT NUMBER: 143:250603
TITLE: Purification of sulfuryl fluoride
INVENTOR(S): Sommer, Christoph
PATENT ASSIGNEE(S): Solvay Fluor GmbH, Germany
SOURCE: Eur. Pat. Appl., 5 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1571126	A1	20050907	EP 2004-5084	20040304
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK				
WO 2005085128	A1	20050915	WO 2005-EP1282	20050209
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1732845	A1	20061220	EP 2005-701386	20050209
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR				
CN 1926059	A	20070307	CN 2005-80006909	20050209
US 2007154376	A1	20070705	US 2006-591554	20061009
PRIORITY APPLN. INFO.:			EP 2004-5084 A	20040304
			WO 2005-EP1282 W	20050209

AB CO2-containing SO2F2 is contacted with a mol. sieve 4 Å at 0-40° and 1-11 bar. Only CO2 is adsorbed. The loaded mol. sieve may be regenerated in vacuum or in an inert gas flow (e.g., N2) at ≥150°.

IC ICM C01B017-46
ICS B01J020-18; B01D053-04; C01B039-02; C01B037-02

CC 49-5 (Industrial Inorganic Chemicals)

ST sulfuryl fluoride purifn carbon dioxide removal

IT Molecular sieves
(adsorbent for removal of carbon dioxide impurity from sulfuryl fluoride)

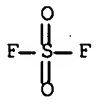
IT 2699-79-8P, Sulfuryl fluoride
RL: PUR (Purification or recovery); PREP (Preparation)
(purification by removal of carbon dioxide on mol. sieve)

IT 124-38-9, Carbon dioxide, processes
RL: REM (Removal or disposal); PROC (Process)
(removal of carbon dioxide impurity from sulfuryl fluoride on mol. sieve)

IT 2699-79-8P, Sulfuryl fluoride
RL: PUR (Purification or recovery); PREP (Preparation)
(purification by removal of carbon dioxide on mol. sieve)

RN 2699-79-8 CAPLUS

CN Sulfuryl fluoride (CA INDEX NAME)

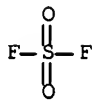


IT 124-38-9, Carbon dioxide, processes
RL: REM (Removal or disposal); PROC (Process)
(removal of carbon dioxide impurity from sulfuryl fluoride on mol. sieve)
RN 124-38-9 CAPLUS
CN Carbon dioxide (CA INDEX NAME)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 5 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:266905 CAPLUS Full-text
DOCUMENT NUMBER: 143:468869
TITLE: Experience with the use of sulfur in laser facilities
AUTHOR(S): Bagretcov, V. A.; Vinogradsky, L. M.; Kargin, V. A.; Kutcherova, O. N.; Mazurin, I. M.
CORPORATE SOURCE: Russia
SOURCE: Trudy RFYaTs-VNIIEF (2004), 6, 186-191, 1 plate
CODEN: TRRFAM
PUBLISHER: RFYaTS-VNIIEF
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB Research results of SF6 composition and development of the high pure SF6 technol., which were obtained at the fabrication of gas supplying system for I laser Iskra-5" are reported. Results of mass-spectrometer analyses of SF6 on the contents of 26 admixts. are presented. Influence of admixts. on energetic and operational characteristics for I laser installation is analyzed. The technol. of SF6 addnl. purification was developed. High pure SF6 for laser applications was obtained. Besides the works on the creation of special balloons for storage and transportation of high pure gases were carried out.
CC 73-10 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
IT Impurities
(in sulfur hexafluoride; experience with use of sulfur in laser facilities)
IT 74-82-8, Methane, occurrence 74-86-2, Acetylene, occurrence 75-46-7, Trifluoromethane 115-07-1, Propene, occurrence 124-38-9, Carbon dioxide, occurrence 355-42-0, Tetradecafluorohexane 463-58-1, Carbonyl sulfide 630-08-0, Carbon monoxide, occurrence 2699-79-8 , Sulfonyl difluoride 7440-37-1, Argon, occurrence 7446-09-5, Sulfur dioxide, occurrence 7664-39-3, Hydrogen fluoride, occurrence 7783-06-4, Hydrogen sulfide, occurrence 7783-41-7, Fluorine oxide f2o 7783-61-1, Silicon tetrafluoride 25167-67-3, Butene
RL: OCU (Occurrence, unclassified); OCCU (Occurrence)
(impurities in sulfur hexafluoride; experience with use of sulfur in laser facilities)
IT 124-38-9, Carbon dioxide, occurrence 2699-79-8, Sulfonyl difluoride
RL: OCU (Occurrence, unclassified); OCCU (Occurrence)
(impurities in sulfur hexafluoride; experience with use of sulfur in laser facilities)
RN 124-38-9 CAPLUS
CN Carbon dioxide (CA INDEX NAME)

RN 2699-79-8 CAPLUS
CN Sulfuryl fluoride (CA INDEX NAME)



L24 ANSWER 6 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:832312 CAPLUS Full-text
DOCUMENT NUMBER: 138:116112
TITLE: Spark decomposition of SF6, SF6/N2 (10: 90 and 5: 95) mixtures in the presence of solid additives (polyethylene, polypropylene or Teflon), gaseous additives (methane, ethylene, octafluoropropane, carbon monoxide or dioxide), water or oxygen
AUTHOR(S): Casanovas, A. M.; Diaz, J.; Casanovas, J.
CORPORATE SOURCE: CPAT, UMR 5002, Universite Paul Sabatier, Toulouse, 31062, Fr.
SOURCE: Journal of Physics D: Applied Physics (2002), 35(20), 2558-2569
CODEN: JPAPBE; ISSN: 0022-3727
PUBLISHER: Institute of Physics Publishing
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The present paper is a continuation of the studies on the sparking-induced decomposition of SF6 and SF6/N2 (10: 90) mixts. which have already been carried out in the authors' laboratory, both exptl. and numerically. It concerns the decomposition of SF6/N2 mixts. (100 kPa) containing 100%, 10% or 5% of SF6, under high-energy sparks (3.6 J spark-1) generated in a 340. cm3 exptl. cell between a stainless steel point and a stainless steel plane. The authors' attention was focused on the following main byproducts: (SF4 + SOF2), (SOF4 + SO2F2), S2F10, CF4, CO and CO2 which were studied by varying the concentration of the impurities added H2O, O2 (0-0.2%), in the presence of atoms such as H and C released from vaporized solid insulators (polyethylene [C2H4]n, polypropylene [C3H6]n, Teflon [CF2]n) or from gaseous additives (methane CH4 (0-4%), ethylene C2H4 (0-2%), octafluoropropane C3F8 (0-5%)), with the aim of simulating the occurrence of sparking in elec. devices, especially along spacers. As SF6/CO2 and SF6/N2/CO2 mixts. are reported to be able to constitute promising SF6 substitutes for industrial applications, the authors also studied the chemical stability of SF6 and SF6/N2 (5: 95) mixts. in the presence of 0-20% CO2. The presence of additives CH4, C2H4, C3F8 or solid insulator (polyethylene, polypropylene, Teflon) leads to lower production of (SF4 + SOF2) and S2F10 in dilute SF6 than in pure SF6 when the percentages of additives or the amts. of solid insulator vaporized are high. Concerning the additive CO2, the authors observe an increased production of (SOF4 + SO2F2) and a formation of large quantities of CO, more pronounced in

SF6/N2 (5: 95) mixts. than in pure SF6. In contrast, the presence of CO leads to a lesser degree of decomposition of diluted than undiluted SF6.

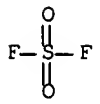
CC 76-11 (Electric Phenomena)
Section cross-reference(s): 38, 67

IT 75-73-0, Carbon fluoride (CF4) 2699-79-8, Sulfur fluoride oxide (SF2O2) 5714-22-7, Sulfur fluoride (S2F10) 7783-42-8, Sulfur fluoride oxide (SF2O) 7783-60-0, Sulfur fluoride (SF4) 13709-54-1, Sulfur fluoride oxide (SF4O)
RL: FMU (Formation, unclassified); FORM (Formation, nonpreparative)
(spark decomposition of sulfur fluoride, sulfur fluoride/nitrogen mixts. in presence of solid additives, gaseous additives, water or oxygen)

IT 124-38-9, Carbon dioxide, processes 630-08-0, Carbon monoxide, processes
RL: FMU (Formation, unclassified); NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PYP (Physical process); FORM (Formation, nonpreparative); PROC (Process); USES (Uses)
(spark decomposition of sulfur fluoride, sulfur fluoride/nitrogen mixts. in presence of solid additives, gaseous additives, water or oxygen)

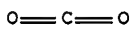
IT 2699-79-8, Sulfur fluoride oxide (SF2O2)
RL: FMU (Formation, unclassified); FORM (Formation, nonpreparative)
(spark decomposition of sulfur fluoride, sulfur fluoride/nitrogen mixts. in presence of solid additives, gaseous additives, water or oxygen)

RN 2699-79-8 CAPLUS
CN Sulfuryl fluoride (CA INDEX NAME)



IT 124-38-9, Carbon dioxide, processes
RL: FMU (Formation, unclassified); NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PYP (Physical process); FORM (Formation, nonpreparative); PROC (Process); USES (Uses)
(spark decomposition of sulfur fluoride, sulfur fluoride/nitrogen mixts. in presence of solid additives, gaseous additives, water or oxygen)

RN 124-38-9 CAPLUS
CN Carbon dioxide (CA INDEX NAME)



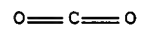
REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 7 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:830812 CAPLUS. Full-text
DOCUMENT NUMBER: 137:332543
TITLE: Sensitive determination of oxygen and other IR-active contaminants in pure fluorine
AUTHOR(S): Brenner, Karoly; Czegledi, Alexander; Ebert, Volker; Teichert, Holger

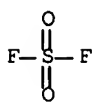
CORPORATE SOURCE: Entwicklung Spezialgase/Labor, Messer Griesheim GmbH (MG), Krefeld, D-47809, Germany
SOURCE: Chemie Ingenieur Technik (2002), 74(10), 1389-1398
CODEN: CITEAH; ISSN: 0009-286X
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
DOCUMENT TYPE: Journal
LANGUAGE: German

AB A method was developed for the determination of O2 in pure F samples by spectroscopic measurements in the near IR (NIR) range. Using as monochromatic light source vertical cavitiy surface emitting laser (VCSEL) diodes and a corrosion resistant stainless steel flow-through absorption cell an absorption spectrometer was constructed. Traces of O in F or other corrosive gases were determined at 761 nm with sensitivities <100 ppmv and a high time resolution (≥1 s). On industrial relevant samples the O2 content in F samples was determined with the developed spectrometer and compared to measurements with Fourier transform IR (FTIR) spectroscopy. Laser spectroscopic measurements performed on compressed gas cylinders showed O2 concns. of 45-230 ppmv and on produced generator gas concns. of 400-885 ppmv within an operating time of .apprx.5 h of the generator. The FTIR measurements on these samples revealed as typical contaminants HF, CO2, COF2, SO2F2, CF4, SiF4, and SF6 in a large concentration range. The results are discussed regarding the origin of the contamination in the different F-sources.

CC 79-6 (Inorganic Analytical Chemistry)
ST oxygen impurity detn fluorine near IR spectroscopy
IT Impurities
(O determination and determination of other IR-active contaminants in pure F)
IT 75-46-7, Trifluoromethane 75-73-0, Tetrafluoromethane 76-16-4, Hexafluoroethane 124-38-9, Carbon dioxide, analysis 2551-62-4, Sulfur hexafluoride 2699-79-8, Sulfur fluoride oxide (SF2O2) 7664-39-3, Hydrofluoric acid, analysis 7782-44-7, Oxygen, analysis 7783-61-1, Silicon fluoride (SiF4)
RL: ANT (Analyte); ANST (Analytical study)
(O determination and determination of other IR-active contaminants in pure F)
IT 124-38-9, Carbon dioxide, analysis 2699-79-8, Sulfur fluoride oxide (SF2O2)
RL: ANT (Analyte); ANST (Analytical study)
(O determination and determination of other IR-active contaminants in pure F)
RN 124-38-9 CAPLUS
CN Carbon dioxide (CA INDEX NAME)



RN 2699-79-8 CAPLUS
CN Sulfuryl fluoride (CA INDEX NAME)



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 8 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:732205 CAPLUS Full-text
DOCUMENT NUMBER: 137:388446
TITLE: Hazardous materials: Requirements for maintenance, requalification, repair and use of DOT specification cylinders; final rule
CORPORATE SOURCE: Research and Special Programs Administration (RSPA), DOT, USA
SOURCE: Federal Register (2002), 67(153), 51625-51668, 8 Aug 2002
CODEN: FEREAC; ISSN: 0097-6326
PUBLISHER: Superintendent of Documents
DOCUMENT TYPE: Journal
LANGUAGE: English

AB In this final rule, RSPA is amending the requirements of the Hazardous Materials Regulations applicable to the maintenance, requalification, repair, and use of DOT specification cylinders. In addition, RSPA is adopting changes to revise the requirements for approval of cylinder requalifiers, independent inspection agencies, and non-domestic chemical anal. and tests. Further, RSPA is removing authorization for the manufacture of DOT specification cylinders made with aluminum alloy 6351-T6. This action is being taken to simplify the regulations, respond to petitions for rule making, address recommendations of the National Transportation Safety Board, and enhance the safe transportation of hazardous materials in cylinders.

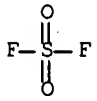
CC 59-5 (Air Pollution and Industrial Hygiene)

IT 74-84-0, Ethane, miscellaneous 74-85-1, Ethylene, miscellaneous 74-87-3, Methyl chloride, miscellaneous 74-93-1, Methyl mercaptan, miscellaneous 74-99-7D, Methyl acetylene, mixture with propadiene 75-01-4, Vinyl chloride, miscellaneous 75-02-5, Vinyl fluoride 75-19-4, Cyclopropane 75-37-6, r-152a 75-38-7, r-1132a 75-45-6, r-22 75-50-3, Trimethylamine, miscellaneous 75-63-8, r-13b1 75-68-3, r-142b 75-71-8, r-12 75-72-9, r-13 76-15-3, r-115 124-38-9, Carbon dioxide, miscellaneous 124-40-3, Dimethylamine, miscellaneous 460-19-5, Cyanogen 463-49-0D, Propadiene, mixture with Me acetylene 2551-62-4, Sulfur hexafluoride 2696-92-6, Nitrosyl chloride 2699-79-8, Sulfuryl fluoride 7446-09-5, Sulfur dioxide, miscellaneous 7647-01-0, Hydrogen chloride, miscellaneous 7664-39-3, Hydrogen fluoride, miscellaneous 7664-41-7, Ammonia, miscellaneous 7782-50-5, Chlorine, miscellaneous 7782-65-2, Germane 7783-06-4, Hydrogen sulfide, miscellaneous 10024-97-2, Nitrous oxide, miscellaneous 13463-39-3, Nickel carbonyl 13463-40-6, Iron pentacarbonyl 56275-41-3, r-500
RL: MSC (Miscellaneous)
(requirements for maintenance, requalification, repair and use of DOT specification cylinders)

IT 124-38-9, Carbon dioxide, miscellaneous 2699-79-8, Sulfuryl fluoride
RL: MSC (Miscellaneous)
(requirements for maintenance, requalification, repair and use of DOT specification cylinders)

RN 124-38-9 CAPLUS
CN Carbon dioxide (CA INDEX NAME)

RN 2699-79-8 CAPLUS
CN Sulfuryl fluoride (CA INDEX NAME)

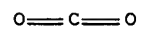


L24 ANSWER 9 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:503185 CAPLUS Full-text
DOCUMENT NUMBER: 137:87570
TITLE: Sensitive determination of oxygen and other IR-active impurities in pure fluorine
AUTHOR(S): Brenner, K.; Czegledi, A.; Ebert, V.; Teichert, H.
CORPORATE SOURCE: Krefeld, Germany
SOURCE: VDI-Berichte (2002), 1667(Anwendungen und Trends in der Optischen Analysenmesstechnik), 73-80
CODEN: VDIBAP; ISSN: 0083-5560
PUBLISHER: VDI Verlag GmbH
DOCUMENT TYPE: Journal
LANGUAGE: German

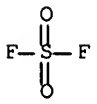
AB A compact diode laser absorption spectrometer was developed that can quant. detect traces of O2 in F2 with high sensitivity (<100 ppmv) and time resolution (≥1 s). This system was tested in a special gasworks in Germany to study whether it was able to measure the O2 content in industrial F2 samples along with other heteronuclear impurities. The measurements of compressed gas bottle of F2 (100%) gave O2 concns. of 45-230 ppmv. The FTIR measurements showed the presence of HF, CO2, COF2, SO2F2, CF4, SiF4, and SF6 as typical impurities in a wide range of concns., from % of HF to <0.5 ppmv of SF6.

CC 79-6 (Inorganic Analytical Chemistry)
Section cross-reference(s): 73
ST fluorine gas oxygen impurity detn laser absorption spectrometry
IT Impurities
(O and other IR-active impurity determination in pure F)
IT Semiconductor lasers
(O and other IR-active impurity determination in pure F using)
IT Laser spectroscopy
(absorption; O and other IR-active impurity determination in pure F using)
IT Absorption spectroscopy
(laser-induced; O and other IR-active impurity determination in pure F using)
IT Gas sensors
(oxygen; O and other IR-active impurity determination in pure F)
IT 7782-41-4, Fluorine, analysis
RL: AMX (Analytical matrix); ANST (Analytical study)
(O and other IR-active impurity determination in pure F)
IT 75-73-0, Tetrafluoromethane 124-38-9, Carbon dioxide, analysis
353-50-4, Carbon fluoride oxide (COF2) 2551-62-4, Sulfur hexafluoride

2699-79-8, Sulfur fluoride oxide (SF2O2) 7664-39-3, Hydrofluoric acid, analysis 7783-61-1, Silicon tetrafluoride
RL: ANT (Analyte); ANST (Analytical study)
(O and other IR-active impurity determination in pure F)
IT 7782-44-7, Oxygen, analysis
RL: ANT (Analyte); ANST (Analytical study)
(sensors; O and other IR-active impurity determination in pure F)
IT 124-38-9, Carbon dioxide, analysis 2699-79-8, Sulfur fluoride oxide (SF2O2)
RL: ANT (Analyte); ANST (Analytical study)
(O and other IR-active impurity determination in pure F)
RN 124-38-9 CAPLUS
CN Carbon dioxide (CA INDEX NAME)



RN 2699-79-8 CAPLUS
CN Sulfuryl fluoride (CA INDEX NAME)

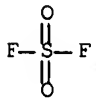


REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 10 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:488687 CAPLUS Full-text
DOCUMENT NUMBER: 137:225078
TITLE: Chemical decomposition of high pressure SF6/N2 (5:95) mixtures under negative DC corona discharges
AUTHOR(S): Diaz, Joseph; Casanovas, Anne-Marie; Godard, Christine; Casanovas, Joseph
CORPORATE SOURCE: CPAT, UMR 5002, Univ. Paul Sabatier, Toulouse, Fr.
SOURCE: Gaseous Dielectrics IX, [Proceedings of the International Symposium on Gaseous Dielectrics], 9th, Ellicott City, MD, United States, May 21-25, 2001 (2001), 543-547. Editor(s): Christophorou, Loucas G.; Olthoff, James K. Kluwer Academic/Plenum Publishers: New York, N. Y.
CODEN: 69CUJE; ISBN: 0-306-46705-4
DOCUMENT TYPE: Conference
LANGUAGE: English
AB Under neg. d.c. corona discharges, the main gaseous byproducts of the decomposition of high pressure SF6/N2 mixts. containing 5% SF6, with no impurity added, were SOF4, SO2F2, S2F10, S2O3F6, (SF5)2NF, and NF3. The yields of these gaseous byproducts were generally lower or equal to that produced in the SF6/N2 mixts. containing 10% SF6. A small production of N2O and CO2 was also detected.
CC 76-11 (Electric Phenomena)

IT 124-38-9, Carbon dioxide, formation (nonpreparative)
2699-79-8, Sulfur fluoride oxide (SF2O2) 5714-22-7, Sulfur fluoride (S2F10) 7783-54-2, Nitrogen fluoride (NF3) 10024-97-2, Nitrogen oxide (N2O), formation (nonpreparative) 13709-54-1, Sulfur fluoride oxide (SF4O) 81439-35-2 81625-84-5, Sulfur fluoramide fluoride (S2(FN)F10)
RL: FMU (Formation, unclassified); FORM (Formation, nonpreparative)
(chemical decomposition of high pressure sulfur fluoride/nitrogen mixts. under
neg. DC corona discharges)
IT 124-38-9, Carbon dioxide, formation (nonpreparative)
2699-79-8, Sulfur fluoride oxide (SF2O2)
RL: FMU (Formation, unclassified); FORM (Formation, nonpreparative)
(chemical decomposition of high pressure sulfur fluoride/nitrogen mixts. under
neg. DC corona discharges)
RN 124-38-9 CAPLUS
CN Carbon dioxide (CA INDEX NAME)

RN 2699-79-8 CAPLUS
CN Sulfuryl fluoride (CA INDEX NAME)



REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 11 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2000:119486 CAPLUS Full-text
DOCUMENT NUMBER: 132:174298
TITLE: Chemical kinetics modelling of a decaying SF6 arc plasma in the presence of a solid organic insulator, copper, oxygen and water
AUTHOR(S): Coll, I.; Casanovas, A. M.; Vial, L.; Gleizes, A.; Casanovas, J.
CORPORATE SOURCE: CPAT-ESA 5002, Universite Paul Sabatier, Toulouse, 31062, Fr.
SOURCE: Journal of Physics D: Applied Physics (2000), 33(3), 221-229
CODEN: JPAPBE; ISSN: 0022-3727
PUBLISHER: Institute of Physics Publishing
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The composition variations occurring in decaying SF6 arc plasmas in the presence of atoms released from the vaporization of organic insulators (e.g. Teflon, polyethylene, polypropylene, Megelit, Nylon), Cu, O, and water were

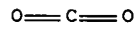
studied between 12,000 K and 300 K by a chemical kinetics model. From the results obtained at 300 K and a pressure of 101.3 kPa: (i) the role of the impurities on the formation of the SF6 decomposition products: SF4, SOF2, SO2F2, and S2F10, was determined; (ii) it was confirmed that the vaporization of an organic insulator leads to the appearance of CF4 and an increase in the generation of the major byproduct (SF4 + SOF2) which is correlated to the production of CF4; (iii) it was seen that, for a given amount of vaporized insulator, insulators that contain F atoms brought about less SF6 decomposition than those that did not.

CC 76-11 (Electric Phenomena)
Section cross-reference(s): 22, 35, 67

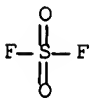
IT 75-73-0, Carbon tetrafluoride 124-38-9, Carbon dioxide, formation (nonpreparative) 353-50-4, Carbonyl fluoride 630-08-0, Carbon monoxide, formation (nonpreparative) 2699-79-8, Sulfur fluoride oxide (SF2O2) 5714-22-7, Disulfur decafluoride 7446-09-5, Sulfur dioxide, formation (nonpreparative) 7664-39-3, Hydrofluoric acid, formation (nonpreparative) 7727-37-9, Nitrogen, formation (nonpreparative) 7782-41-4, Fluorine, formation (nonpreparative) 7783-06-4, Hydrogen sulfide, formation (nonpreparative) 7783-41-7, Oxygen difluoride 7783-42-8, Sulfur fluoride oxide (SF2O) 7783-60-0, Sulfur tetrafluoride 7789-19-7, Cupric fluoride 12061-70-0, Oxygen monofluoride 13827-32-2, Sulfur monoxide 13940-21-1, Hydrogen sulfide (HS) 14762-94-8, formation (nonpreparative) 17778-88-0, formation (nonpreparative) 20901-21-7, Disulfur monoxide
RL: FMU (Formation, unclassified); FORM (Formation, nonpreparative)
(chemical kinetics modeling of a decaying SF6 arc plasma in the presence of a polymeric insulator, Cu, O, and water)

IT 124-38-9, Carbon dioxide, formation (nonpreparative)
2699-79-8, Sulfur fluoride oxide (SF2O2)
RL: FMU (Formation, unclassified); FORM (Formation, nonpreparative)
(chemical kinetics modeling of a decaying SF6 arc plasma in the presence of a polymeric insulator, Cu, O, and water)

RN 124-38-9 CAPLUS
CN Carbon dioxide (CA INDEX NAME)



RN 2699-79-8 CAPLUS
CN Sulfuryl fluoride (CA INDEX NAME)



REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 12 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1997:353999 CAPLUS Full-text
DOCUMENT NUMBER: 126:326887

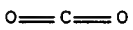
TITLE: Recycling of spent interior space fumigants
PATENT ASSIGNEE(S): Binker Materialschutz Gmbh, Germany
SOURCE: Ger. Offen., 8 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19540331	A1	19970430	DE 1995-19540331	19951028
DE 19540331	C2	20030220		

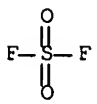
PRIORITY APPLN. INFO.: DE 1995-19540331 19951028

AB Spent fumigants (CO2, sulfuryl chloride, carbonyl sulfide, etc.), used for fumigation of interior spaces (storage rooms, mills, museums, churches, etc.) are separated from the accompanying air and recycled.

IC ICM A01M001-20
CC 5-4 (Agrochemical Bioregulators)
IT 74-88-4P, Methyl iodide, biological studies 124-38-9P, Carbon dioxide, biological studies 463-58-1P, Carbonyl sulfide 2699-79-8P, Sulfuryl fluoride 7791-25-5P, Sulfuryl chloride, RL: BUU (Biological use, unclassified); PUR (Purification or recovery); BIOL (Biological study); PREP (Preparation); USES (Uses) (recycling of, as spent interior space fumigants)
IT 124-38-9P, Carbon dioxide, biological studies 2699-79-8P, Sulfuryl fluoride
RL: BUU (Biological use, unclassified); PUR (Purification or recovery); BIOL (Biological study); PREP (Preparation); USES (Uses) (recycling of, as spent interior space fumigants)
RN 124-38-9 CAPLUS
CN Carbon dioxide (CA INDEX NAME)



RN 2699-79-8 CAPLUS
CN Sulfuryl fluoride (CA INDEX NAME)



L24 ANSWER 13 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1996:134526 CAPLUS Full-text
DOCUMENT NUMBER: 124:183147
TITLE: Removal of residual impurities in plasma chemical vaporization machining
INVENTOR(S): Mori, Juzo; Ichimaru, Hiroshi; Nakagawa, Shinsuke
PATENT ASSIGNEE(S): Mori Juzo, Japan; Central Glass Co Ltd

SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07331449	A	19951219	JP 1994-123675	19940606

PRIORITY APPLN. INFO.: JP 1994-123675 19940606

AB Residual impurities in plasma chemical vaporization machining using ≥1 halide gas are removed by mixing with an oxidizing agent. The halide gas may be SF6, CF4, NF3, or CCl4. The oxidizing agent may be O2, O3, and/or N2O. This method is useful for machining of Si, Ti, etc.

IC ICM C23C016-50
ICS B01J019-08

CC 56-6 (Nonferrous Metals and Alloys)

ST plasma chem vaporization machining impurity removal; oxidant chem machining impurity removal

IT Etching
Machining
Oxidizing agents
(removal of residual impurities in plasma chemical vaporization machining)

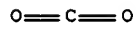
IT 124-38-9, Carbon dioxide, processes 353-50-4, Carbon oxyfluoride (COF2) 2699-79-8, Sulfur oxyfluoride (SO2F2) 7446-09-5, Sulfur dioxide, processes 7550-45-0, Titanium tetrachloride, processes 7783-61-1, Silicon tetrafluoride 10102-43-9, Nitrogen monooxide, processes 10102-44-0, Nitrogen dioxide, processes 13709-54-1, Sulfur oxyfluoride (SOF4)
RL: REM (Removal or disposal); PROC (Process)
(impurity; removal of residual impurities in plasma chemical vaporization machining)

IT 7782-44-7, Oxygen, uses 10024-97-2, Nitrogen oxide (N2O), uses 10028-15-6, Ozone, uses
RL: NUU (Other use, unclassified); USES (Uses)
(oxidizing agent; removal of residual impurities in plasma chemical vaporization machining)

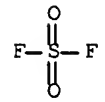
IT 56-23-5, Carbon tetrachloride, processes 75-73-0, Carbon tetrafluoride 2551-62-4, Sulfur hexafluoride 7440-21-3, Silicon, processes 7440-32-6, Titanium, processes 7782-41-4, Fluorine, processes 7783-54-2, Nitrogen trifluoride
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(removal of residual impurities in plasma chemical vaporization machining)

IT 124-38-9, Carbon dioxide, processes 2699-79-8, Sulfur oxyfluoride (SO2F2)
RL: REM (Removal or disposal); PROC (Process)
(impurity; removal of residual impurities in plasma chemical vaporization machining)

RN 124-38-9 CAPLUS
CN Carbon dioxide (CA INDEX NAME)



RN 2699-79-8 CAPLUS
CN Sulfuryl fluoride (CA INDEX NAME)



L24 ANSWER 14 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1992:268235 CAPLUS Full-text
DOCUMENT NUMBER: 116:268235
TITLE: Application of a cryospectroscopy method to study the molecular composition of gases
AUTHOR(S): Zhigula, L. A.; Kolomiitsova, T. D.; Kondaurov, V. A.; Melikova, S. M.; Shchepkin, D. N.
CORPORATE SOURCE: Santkt-Petersburg Gos. Univ., St. Petersburg, USSR
SOURCE: Zhurnal Prikladnoi Spektroskopii (1992), 56(3), 381-8
CODEN: ZPSBAX; ISSN: 0514-7506
DOCUMENT TYPE: Journal
LANGUAGE: Russian

AB A cryogenic procedure was developed for the sensitive determination of mol. microimpurities in pure and ultrapure gases. IR absorption spectra of liquid air, oxygen as well as of solns. of 20 different substances (hydrocarbons, freons etc.) in liquid argon were investigated. When using optical layers up to 2 m, the sensitivity of the procedure amts. to 10-8-10-4 mol.% from the ground substance. Calibration tables for 27 characteristic impurities are presented.

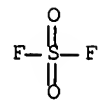
CC 79-6 (Inorganic Analytical Chemistry)
Section cross-reference(s): 59

IT 74-82-8, Methane, analysis 74-84-0, Ethane, analysis 74-85-1, Ethene, analysis 74-86-2, Acetylene, analysis 75-15-0, Carbon disulfide, analysis 75-46-7, Trifluoromethane 75-69-4, Freon-11 75-71-8, Freon-12 75-72-9, Freon-13 75-73-0, Carbon tetrafluoride 76-16-4, Freon-116 76-19-7, Freon-218 124-38-9, Carbon dioxide, analysis 353-50-4, Carbonic difluoride 463-58-1, Carbon oxide sulfide (COS) 593-53-3 630-08-0, Carbon monoxide, analysis 2314-97-8, Trifluoroiodomethane 2551-62-4, Sulfur hexafluoride 2699-79-8, Sulfur fluoride oxide (SF2O2) 5714-22-7, Sulfur fluoride (S2F10) 7783-41-7, Oxygen difluoride 7783-54-2, Nitrogen trifluoride 7783-61-1, Silicon tetrafluoride 10024-97-2, Nitrous oxide, analysis 10028-15-6, Ozone, analysis 13709-54-1
RL: ANT (Analyte); ANST (Analytical study)
(determination of, in gases by cryogenic IR spectrometry)

IT 124-38-9, Carbon dioxide, analysis 2699-79-8, Sulfur fluoride oxide (SF2O2)
RL: ANT (Analyte); ANST (Analytical study)
(determination of, in gases by cryogenic IR spectrometry)

RN 124-38-9 CAPLUS
CN Carbon dioxide (CA INDEX NAME)

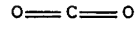
RN 2699-79-8 CAPLUS
CN Sulfuryl fluoride (CA INDEX NAME)



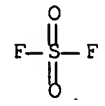
L24 ANSWER 15 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1989:138075 CAPLUS Full-text
DOCUMENT NUMBER: 110:138075
TITLE: Refining of sulfur hexafluoride
AUTHOR(S): Mazurin, I. M.; Panov, V. V.; Salekhov, L. T.; Shevtsov, A. V.
CORPORATE SOURCE: Gos. Nauchno-Issled. Energ. Inst., Moscow, USSR
SOURCE: Vysokochistye Veshchestva (1989), (1), 95-101
CODEN: VYVEEC; ISSN: 0235-0122
DOCUMENT TYPE: Journal
LANGUAGE: Russian

AB Directional crystallization in liquid N was used for the removal of CO2, CF4, oil, SO2, SOF2, SO2F2, C4F6, SiF4, SOF4, and other impurities from SF6. The sp. energy consumption was 200-250 kJ/kg SF6 corresponding to 2.5 kg liquid N2/kg SF6. The concns. of impurities in the initial and final product were determined by mass spectroscopy.

CC 49-8 (Industrial Inorganic Chemicals)
IT Hydrocarbon oils
RL: REM (Removal or disposal); PROC (Process)
(removal of, from sulfur hexafluoride, by directional crystallization at cryogenic temperature)
IT Crystallization
(directional, of sulfur hexafluoride, impurity removal by)
IT 75-73-0, Carbon tetrafluoride 124-38-9, Carbon dioxide, uses and miscellaneous 685-63-2 2699-79-8, Sulfuryl fluoride 7446-09-5, Sulfur dioxide, uses and miscellaneous 7783-42-8, Thionyl fluoride 7783-61-1, Silicon tetrafluoride 13709-54-1, Sulfur fluoride oxide (SOF4)
RL: REM (Removal or disposal); PROC (Process)
(removal of, from sulfur hexafluoride, by directional crystallization at cryogenic temperature)
IT 124-38-9, Carbon dioxide, uses and miscellaneous 2699-79-8, Sulfuryl fluoride
RL: REM (Removal or disposal); PROC (Process)
(removal of, from sulfur hexafluoride, by directional crystallization at cryogenic temperature)
RN 124-38-9 CAPLUS
CN Carbon dioxide (CA INDEX NAME)



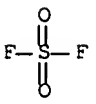
RN 2699-79-8 CAPLUS
CN Sulfuryl fluoride (CA INDEX NAME)



L24 ANSWER 16 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1986:434744 CAPLUS Full-text
DOCUMENT NUMBER: 105:34744
TITLE: Determination of impurities in sulfur hexafluoride
AUTHOR(S): Wan, Zitzun; Yue, Fupen; Xia, Shugan
CORPORATE SOURCE: Beijing Sci.-Res. Inst. Labour Hyg., Beijing, Peop. Rep. China
SOURCE: Zhurnal Analiticheskoi Khimii (1986), 41(4), 649-52
CODEN: ZAKHA8; ISSN: 0044-4502
DOCUMENT TYPE: Journal
LANGUAGE: Russian

AB Fourteen impurities were identified by mass fragmentog. The compds. were separated at 50° on a 2-m + 3-mm column packed with silica gel coated with 25 weight% diisooctyl sebacate. SOF2 and SO2F2 were identified also by IR spectrometry and determined by gas chromatog. by using thermal-conductivity and flame-ionization detectors.

CC 79-6 (Inorganic Analytical Chemistry)
ST sulfur fluoride analysis impurity instrumental; mass fragmentog analysis sulfur fluoride; gas chromatog analysis sulfur fluoride; IR spectrometry analysis sulfur fluoride
IT 2699-79-8 7783-42-8
RL: ANST (Analytical study)
(detection and determination of, in sulfur hexafluoride, instrumental)
IT 7446-09-5, analysis 7727-37-9, analysis 7732-18-5, analysis 7782-44-7, analysis 75-73-0 76-16-4 76-19-7 124-38-9, analysis 355-25-9 1873-23-0 42310-84-9
RL: ANST (Analytical study)
(identification of, in sulfur hexafluoride, mass fragmentog.)
IT 2699-79-8
RL: ANST (Analytical study)
(detection and determination of, in sulfur hexafluoride, instrumental)
RN 2699-79-8 CAPLUS
CN Sulfuryl fluoride (CA INDEX NAME)

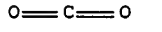


IT 124-38-9, analysis
RL: PROC (Process)
(identification of, in sulfur hexafluoride, mass fragmentog.)
RN 124-38-9 CAPLUS
CN Carbon dioxide (CA INDEX NAME)

L24 ANSWER 17 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1966:402253 CAPLUS Full-text
DOCUMENT NUMBER: 65:2253
ORIGINAL REFERENCE NO.: 65:362c-d
TITLE: Separation of sulfuryl fluoride from sulfur hexafluoride containing gas mixtures
INVENTOR(S): Massonne, Joachim
PATENT ASSIGNEE(S): Kali-Chemie A.-G.
SOURCE: 2 pp.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

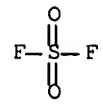
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 1212945		19660324	DE 1964-K53405	19640707
PRIORITY APPLN. INFO.:			DE	19640707

AB The gas mixts. to be purified are passed at 20 to 180° over large surfaces of Al2O3, mol. sieves (13 X), solid oxides, hydroxides, or carbonates of the Group I and II elements, or mixts. thereof. Examples with data of the gas concns. and velocities and of thicknesses and shapes of the solids, layers are given. SO2F2 reacts with the named materials producing nonvolatile products at lower temps.: 2 NaOH + SO2F2 → NaSO3F + NaF + H2O; and at higher temps. 2 CaO + SO2F2 → CaSO4 + CaF2.
IC C01B
CC 17 (Industrial Inorganic Chemicals)
IT 124-38-9, Carbon dioxide
(chromatography of, apparatus for)
IT 2699-79-8P, Sulfuryl fluoride
RL: PREP (Preparation)
(separation from gas containing SF6)
IT 124-38-9, Carbon dioxide
(chromatography of, apparatus for)
RN 124-38-9 CAPLUS
CN Carbon dioxide (CA INDEX NAME)



IT 2699-79-8P, Sulfuryl fluoride
RL: PREP (Preparation)
(separation from gas containing SF6)

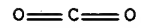
RN 2699-79-8 CAPLUS
CN Sulfuryl fluoride (CA INDEX NAME)



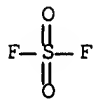
L24 ANSWER 18 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1963:472022 CAPLUS Full-text
DOCUMENT NUMBER: 59:72022
ORIGINAL REFERENCE NO.: 59:13353b-e
TITLE: Volumetric determination of concentrations of sulfuryl fluoride in air
AUTHOR(S): Heuser, Stanley G.
CORPORATE SOURCE: Agr. Res. Council, Slough, UK
SOURCE: Anal. Chem. (1963), 35(10), 1476-9
CODEN: ANCHAM; ISSN: 0003-2700
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB SO2F2 reacts with cold dilute alkali, e.g, 0.1N NaOH, as follows: SO2F2 + 2NaOH → Na-SO3F + NaF + H2O. This equation is the basis for 2 methods for determination of the concentration of SO2F2 and CO2 in air. Samples of SO2F2 vapor in air were taken in evacuated (5 cm. of Hg absolute) 200-ml. of 1-1. glass flasks containing a known volume of standard NaOH (0.1N), and allowed to stand for 24 hrs. Method A: 2 ml. of 20% SrCl2.6H2O is added to an aliquot of the NaOH solution which has reacted with approx. 50 mg. SO2F12 After precipitation of SrCO3, the aliquot is titrated with 0.05N HCl with thymolphthalein as indicator (end point pH 9.2). The difference in titration from that of a reagent blank of the same volume is due to the removal of free alkali by SO2F2 and CO2. A correction for CO2 is made by direct titration at 0°, with the buret tip under the surface to pH 8.3 of excess alkali in another aliquot of the sample without addition of SrCl2, with phenoltetrachlorophthalein as indicator (carbonate to-carbonate). This titration volume, when subtracted from a reagent blank is used to calculate the amts. of SO2F2 and CO2 present. Accuracy = ±2.5% at 50 mg./l. SO2F2, taking 20 ml. aliquots from 50 ml. in a 1. flask. Method B: 0.1N Ba(OH)2 is substituted for NaOH in method A. Titration to pH 9.2 gives reduction of free alkali due to SO2F2 and CO2 as in A. Excess 0.1N HCl, based on the O.IN Ba(OH)2, is added and the solution is back-titrated to pH 5.0 with a mixed indicator (methyl red and bromocresol green. Accuracy = ±0.5% at 10 mg./l. with 1-1. flask. A method is given for correcting the CO2 content when the concentration is above 1% (20 mg./l.). Data are also presented for the recovery of SO2F2 vs. reaction time and normality of the absorbing solution The reaction time limits the usefulness for field applications, but the method is useful for the calibration of thermal conductivity instruments commonly used in the field.

CC 2 (Analytical Chemistry)
IT 124-38-9, Carbon dioxide 2699-79-8, Sulfuryl fluoride
(determination of, in air)
IT 124-38-9, Carbon dioxide 2699-79-8, Sulfuryl fluoride
(determination of, in air)
RN 124-38-9 CAPLUS
CN Carbon dioxide (CA INDEX NAME)



RN 2699-79-8 CAPLUS
CN Sulfuryl fluoride (CA INDEX NAME)



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L9 82 SEA FILE=CAPLUS ABB=ON PLU=ON L1 AND L2
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L11 4 SEA FILE=CAPLUS ABB=ON PLU=ON L8 OR L10
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L25  ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER:        2007:1215080  CAPLUS  Full-text
TITLE:                   Characterization of high molecular weight plasma
                         protein complexes induced by clotting factor
                         rFXIII-treatment in the cynomolgus monkey
AUTHOR(S):               Schaal-Jensen, R.; Kiehr, B.; Boesen, H. T.; Krabbe,
                         J. S.; Sommer, C.; Jacobsen, H.;
                         Oleksiewicz, M. B.
CORPORATE SOURCE:        Novo Nordisk A/S, Maalov, Den.
SOURCE:                  Journal of Thrombosis and Haemostasis (2007), 5(10),
                         2070-2078
                         CODEN: JTHOA5; ISSN: 1538-7933
PUBLISHER:               Blackwell Publishing, Inc.
DOCUMENT TYPE:           Journal
LANGUAGE:                English
AB    Background: In cynomolgus monkeys, suprapharmacol. doses of clotting
      recombinant factor XIII (rFXIII) cause a generalized coagulopathy, associated
      with formation of circulating high mol. weight protein complexes (HMEX). HMEX
      consist of plasma protein substrates cross-linked by FXIII transglutaminase
      activity. Objective: To characterize HMEX, with a view to develop safety
      biomarker assays. Methods: Cynomolgus monkeys received single i.v. injections
      with vehicle or rFXIII at 1, 3 and 10 mg kg-1. Plasma HMEX were analyzed by
      sodium dodecylsulfate-polyacrylmide gel electrophoresis, silver staining,
      Western blotting and quant. dissociation-enhanced lanthanide fluoroimmuno-
      assay. Plasma FXIII antigen was analyzed by quant. ELISA. Human HMEX were
      made in vitro, by spiking plasma with thrombin-activated rFXIII. Results:
      Maximal circulating HMEX levels were reached within 1 h of rFXIII treatment,
      and remained stable over 24 h. HMEX above 250 kDa contained fibrinogen α-
      chains and fibronectin. Fibrinogen γ-chain was detected only in HMEX below
      250 kDa. The total plasma concentration of HMEX was in the low μg mL-1 range,
      distributed on less than 20 main species. Human and cynomolgus HMEX were
      similar. HMEX formation increased with rFXIII dose in a disproportionate
      manner, with 3-fold and fortyfold increases in HMEX exposure associated with
      rFXIII dose increments from 1 to 3 and 3 to 10 mg kg-1, resp. Conclusions:
      The disproportionate HMEX formation parallels the steep toxicity dose response
      previously reported for rFXIII in cynomolgus monkeys, supporting a
      mechanistical role for HMEX in the generalized coagulopathy seen in rFXIII
      toxicity. Our findings support that HMEX constitute candidate (potential)
      safety biomarkers in rFXIII treatment.
REFERENCE COUNT:         19    THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS
                               RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT


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             E F2O2S/MF
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             D SCA
             D L1
             E CO2/MF
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             SEL RN L3
L6          1396 SEA ABB=ON  PLU=ON  (10375-58-3/CRN OR 10375-59-4/CRN OR
             104120-67-4/CRN OR 1111-72-4/CRN OR 113869-22-0/CRN OR
             12181-61-2/CRN OR 12351-94-9/CRN OR 124-38-9/CRN OR 12709-62-5/
             CRN OR 138832-57-2/CRN OR 14485-07-5/CRN OR 182349-88-8/CRN OR
             182349-91-3/CRN OR 18983-82-9/CRN OR 20201-82-5/CRN OR
             20273-05-6/CRN OR 20273-06-7/CRN OR 22377-27-1/CRN OR 24285-82-
             3/CRN OR 243144-23-2/CRN OR 243144-24-3/CRN OR 243144-25-4/CRN
             OR 243144-26-5/CRN OR 243144-27-6/CRN OR 243144-28-7/CRN OR
             243144-29-8/CRN OR 2537-69-1/CRN OR 2684-00-6/CRN OR 270063-98-
             4/CRN OR 301299-78-5/CRN OR 31530-57-1/CRN OR 318953-55-8/CRN
             OR 34715-42-9/CRN OR 37210-16-5/CRN OR 37961-43-6/CRN OR
             39399-66-1/CRN OR 51-90-1/CRN OR 60605-62-1/CRN OR 60730-47-4/C
             RN OR 60934-58-9/CRN OR 61812-10-0/CRN OR 644976-48-7/CRN OR
             68404-37-5/CRN OR 70881-43-5/CRN OR 73145-42-3/CRN OR 75042-80-
             7/CRN OR 75042-81-8/CRN OR 791121-04-5/CRN OR 85401-75-8/CRN
             OR 875829-71-3/CRN OR 942078-48-0/CRN OR 94951-00-5/CRN) OR L3

FILE 'CAPLUS' ENTERED AT 11:04:00 ON 15 NOV 2007
L7            85 SEA ABB=ON  PLU=ON  L5 AND L6
L8             4 SEA ABB=ON  PLU=ON  L7 AND REM+NT/RL
             D SCA TI
L9            82 SEA ABB=ON  PLU=ON  L1 AND L2
L10            4 SEA ABB=ON  PLU=ON  L8 AND L9
L11            4 SEA ABB=ON  PLU=ON  L8 OR L10
L12        16428 SEA ABB=ON  PLU=ON  L6(L)(PURIF? OR REMOV? OR REM/RL OR
             PUR/RL)
L13            5 SEA ABB=ON  PLU=ON  L7 AND L12
L14           35 SEA ABB=ON  PLU=ON  L5(L)(PURIF? OR PUR/RL OR REMOV? OR
             REM/RL)
L15            5 SEA ABB=ON  PLU=ON  L14 AND L7
L16            5 SEA ABB=ON  PLU=ON  L11 OR L13 OR L15
L17           10 SEA ABB=ON  PLU=ON  L7 AND (REMOV? OR PURIF?)
L18           11 SEA ABB=ON  PLU=ON  L17 OR L16
             D SCA TI
L19           17 SEA ABB=ON  PLU=ON  L7 AND (REMOV? OR PURIF? OR ?IMPUR?)
L20           18 SEA ABB=ON  PLU=ON  L19 OR L18
             E SOMMER C/AU
L21           66 SEA ABB=ON  PLU=ON  ("SOMMER C"/AU OR "SOMMER C A"/AU OR
             "SOMMER C C"/AU OR "SOMMER C IRENE"/AU OR "SOMMER C J"/AU OR
             "SOMMER C M"/AU OR "SOMMER C S"/AU OR "SOMMER CHRISTOPH"/AU OR
             "SOMMER CHRISTOPHER"/AU OR "SOMMER CHRISTOPHER C"/AU OR
             "SOMMER CHRISTOPHER CHARLES"/AU)
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L22             2 SEA ABB=ON  PLU=ON  L21 AND ?SULF? AND ?FLUOR?
L23             1 SEA ABB=ON  PLU=ON  L22 AND L20
L24            18 SEA ABB=ON  PLU=ON  L20 OR L23
L25             1 SEA ABB=ON  PLU=ON  L22 NOT L23

     FILE 'CAPLUS' ENTERED AT 12:49:05 ON 15 NOV 2007
                D QUE L24
                D L24 IBIB ABS HITIND HITSTR TOT
                D QUE L25
                D L25 IBIB ABS TOT
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